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Our Docket No.: 42390.P4264

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Yavatkar, et al.

Application No: 09/041,979

Filed: March 13, 1998

For: Ensuring Quality Of Service (QOS) For A Multi-Media Call Through Call Associated Individual Media Stream Bandwidth Control

Examiner: Yao, K.

Art Unit: 2664

EXPRESS MAIL CERTIFICATE OF MAILING

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Assistant Commissioner of Patents
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DECLARATION UNDER 37 CFR 1.131 IN SUPPORT OF PRIOR INVENTION

Sir :

I, Rajendra Yavatkar declare:

1. I am the inventor of the claims of the above-captioned patent application ("the Application") and the inventor of the subject matter described therein.

2. At least prior to September 27, 1997, the filing date of U.S. Patent No. 6,253,207 B1 cited in an Office Action mailed November 27, 2001, the invention claimed in the Application had been conceived in the United States.

3. The invention was actually reduced to practice prior to September 27, 1997.

4. Attached Exhibit A, dated September 12, 1996, is a redacted system design presentation describing the design of the mechanism for self timing refresh and establishes that the subject matter claimed in the Application had been conceived in the United States prior to September 27, 1997.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Dated: Jan 4, 2002

Rajendra S. Yavatkar

EXHIBIT A

General Purpose

The invention is the technique for performing RSVP (ReSerVation Protocol) based admission control and bandwidth management on a shared subnetwork in conjunction with an H.323-compliant terminal (client) and a H.323-based Gatekeeper.

Advantage

H.323 standard does not specify call control procedures that relate individual media streams and their QoS reservation requests with call-level admission control. Moreover, no mechanisms have been designed (or identified) to allow H.323 clients to achieve end-to-need QoS guarantees and tie in such guarantees with the call-level admission control proposed in the H.323 standard. The invention fills the gap by defining necessary protocols and procedures for admission control and for combining call-level admission control with RSVP's end-to-end QoS reservation mechanisms.

The advantages are:

1) Provides for QoS capability to H.323 calls and associated traffic streams;
2) Allows co-existence of Gatekeeper and a separate subnet bandwidth manager in such a way that SBM-aware clients can take advantage of underlying QoS mechanisms and still co-exist with non-SBM aware H.323 clients (that only interact with a Gatekeeper).
3) Allows bandwidth on a shared subnetwork to be managed in such a way that the H.323-based calls and traffic co-exist with rest of the network traffic and do not interfere with the normal operation of the subnetwork;
4) Ties in both call-level and individual media channel level admission control together in one mechanism;
5) Allows H.323 clients to use the RSVP-based admission control procedures to achieve end-to-end (across a path spanning a LAN as well as a WAN) QoS guarantees.

Essential Elements

Each LAN is assumed to have an entity called SBM (Subnet Bandwidth Manager) that provides both call-level and media channel level admission control.

The essential elements of the technique are:

1) a procedure for discovering the presence of an RSVP-based Subnet Bandwidth Manager (SBM);
2) a protocol for specifying and communicating call-level bandwidth reservation requests to the SBM;
3) a method for associating call-level reservation requests with per-connection QoS transport requests for individual media channels in a call;
4) additional protocol and procedure for releasing (tearing down) reservations on a per-call (or per-channel) basis.

Value to Intel

Part of the H.323-based conferencing product. Addition of QoS capability based on RSVP reservations will differentiate Intel H.323 client (and the Gatekeeper) in terms of added functionality and end-to-end predictable performance for A/V streams.

Primary Preparer:
(RAJ YAVATKAR)
7/11/96